

AFN

[About Us](#) [Newsletter](#) [Investor Q&A](#) [Global report 2026](#) [Insect ag](#) [Iran war](#) [Video](#)

Square Roots unveils Tokyo company to blend traditional Japanese farming with high-tech indoor ag

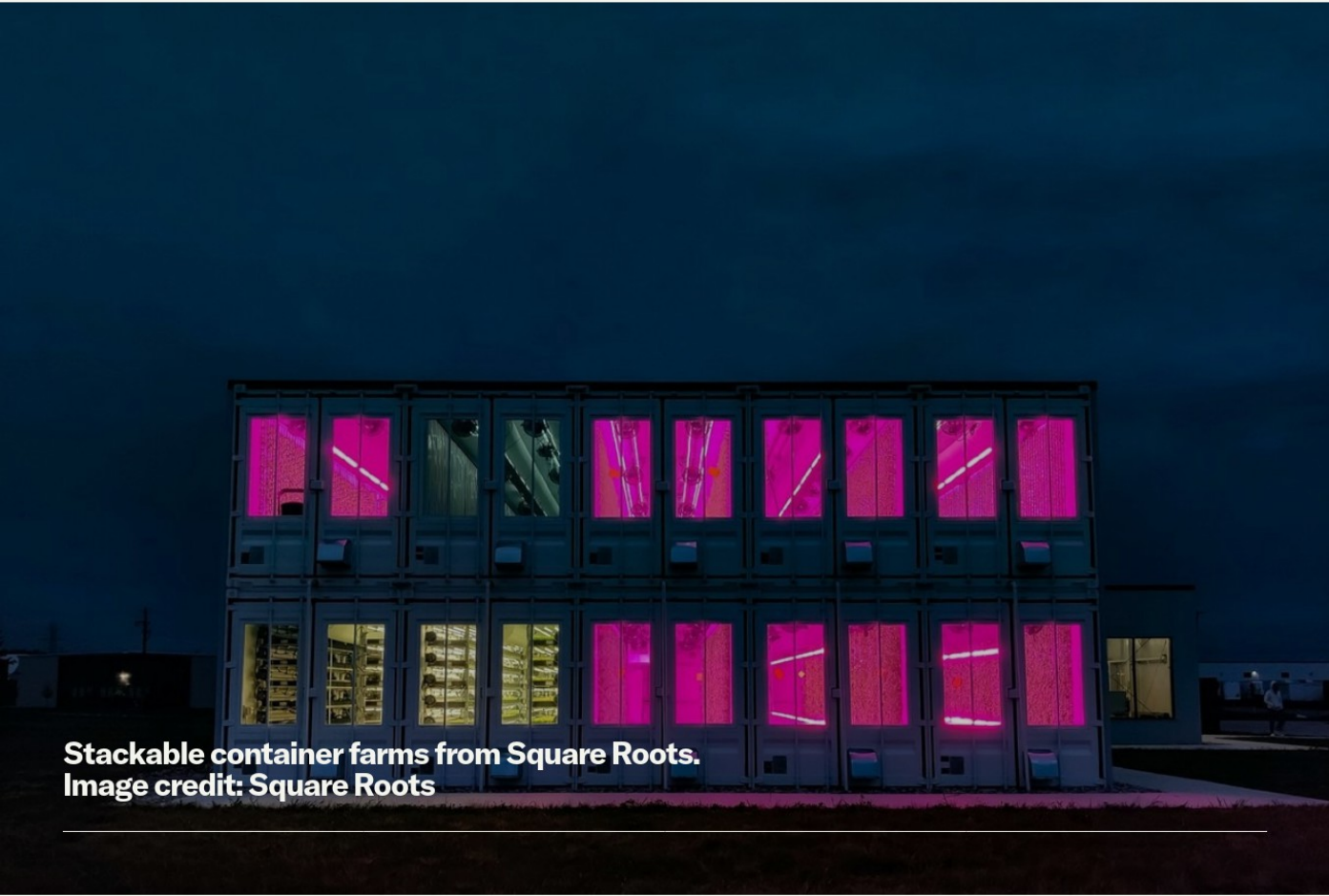
February 20, 2025 | Jennifer Marston

AGTECH

APAC

FOODTECH

NOVEL FARMING SYSTEMS



Stackable container farms from Square Roots.
Image credit: Square Roots

Indoor agriculture player [Square Roots](#) this week announced its expansion to Japan via a new company. Under the Square Roots Japan name, Tokyo-based investor Green Prosperity will operate a network of indoor farms using the Square Roots IP and modular farming platform to grow specialty crops in partnership with traditional farmers.

"The aim was to ensure ongoing year-round production of Japan's specialty crops whatever the weather, while also providing royalties to the original farmers in exchange for their invaluable knowledge, honoring their legacy for years to come," Square Roots CEO Tobias Peggs tells *AgFunderNews*.

He says the idea for Square Roots Japan emerged five years ago after Green Prosperity invited him to visit specialty crop farms on the country's northernmost island, Hokkaido.

While on that trip, Peggs learned that local farming knowledge in Hokkaido is passed from one generation to the next, but was at risk due to climate change and Japan's rapidly aging population, he said.

The conversations with Green Prosperity continued after Peggs' trip. "Over time, we developed a model for translating the wisdom of these farmers into 'golden recipes' for high-tech indoor farms."

"Work has already started on the first farm, and Square Roots' US team is staying close to help with the launch," he says.

Indoor crops: 'We're being realistic about what works economically'

The Square Roots grow platform is made up of modular container farms that use a hydroponic system and custom software to grow and manage plants.

The company primarily grows leafy greens and herbs, and Square Roots Japan will do the same, as these crops are "a sweet spot for indoor farms that we can get started with straight away," according to Peggs.

"We've already been working on crops like mizuna (aka Japanese mustard greens) and shiso (which has both culinary and medicinal uses in Japan)," he says. In future, they plan to visit farms and farmers in the Kochi Prefecture, where Square Roots Japan cofounder Kotaro Shiba is originally from, to learn more about local cuisine.

"Of course, we're also being realistic about what works economically," he adds.

Vertical farming, after all, has seen its fair share of companies in the last 10 years promising to grow everything from wheat to watermelons.

For his part, Peggs acknowledges what is and isn't actually possible in the Square Roots environment. "I would love to start growing Okinawa sweet potatoes, which when roasted are perhaps the most delicious thing I've ever eaten. But Square Roots Japan will likely be focused more on the micros and leafys with some small fruiting crops to start."

"The team at Square Roots Japan are wonderful people – smart, passionate, and inspired by tradition while looking firmly towards the future," he says, adding that they bring a portfolio of food companies that blend reverence for traditional Japanese farming and food with modern technology.

'We have a different position in the market'

Peggs cofounded Square Roots, still based in Brooklyn, New York, in 2016 with Kimball Musk. Over the years, the company has become known for its small-footprint vertical farms built in stackable containers.

"We have a different position in the market to most indoor farming companies," he says.

"Rather than competing against the rest of agriculture to win supermarket shelf space, instead we partner with the rest of agriculture and offer our controlled-climate platform as a means to accelerate ag research, find new solutions faster, or rapidly develop new innovative products and help bring them to market."

Among the company's partnerships are its longstanding deal with US food distributor Gordon Food Service, which uses the Square Roots platform to develop nutrient-dense greens, and the Gates Foundation, which is using the platform "to explore artificial photosynthesis as a means to produce low-cost, low-carbon, high-nutrient foods in low- and middle-income countries."

While Square Roots Tokyo is an entirely separate company, Peggs says the two teams “are also pretty creative together.”

“About a year ago, we started a program in our US R&D facility thinking about wasabi, a much-used root in Japanese cuisine that can take up to three years to reach market maturity. Obviously that’s not practical in an indoor farm.

“So instead we talked with Japanese chefs to understand the application of the end product, which is often grated and turned into paste to garnish steak or sushi. That led us to experiment with quick-growing wasabi microgreens, using environmental stressors to drive up the spice levels, meaning the chefs could quickly pulverize the product and make incredible wasabi paste.”

Square Roots now offers that crop through its Gordon Food Service partnership and says it’s been a big hit amongst consumers.

“Most ‘wasabi’ we see in the US today is actually cheaper horseradish mixed with a green dye. Our wasabi micros are way closer to the real thing,” says Peggs.